HAZARD'S
REGISTER OF PENNSYLVANIA.

DEVOTED TO THE PRESERVATION OF EVERY KIND OF USEFUL INFORMATION RESPECTING THE STATE.

EDITED BY SAMUEL HAZARD.

VOL. XV.--NO. 9. PHILADELPHIA, FEBRUARY 28, 1835. No. 373.

BIOGRAPHICAL SKETCH OF THE LATE THOMAS SAY, ESQ.

A Biographical Sketch of the late Thomas Say, Esq. Read before the Academy of Natural Sciences of Philadelphia, December 16, 1834. By BENJAMIN H. COATES, M. D.

During the twenty-two years which have elapsed since the first institution of the Academy, it is remarkable that our body has seldom, till the present occasion, been called upon to lament the death of one of its founders. That which, according to the usual course of human events, might have been expected to take precedence in the order of time, has occurred in the second place; and while we have had to deplore the loss of many of the brightest ornaments and most useful labourers of our association, the shaft of death has been but rarely directed towards that little band who first brought it into existence. The body which I have the honor to address, owes its origin to a few active individuals; and while the feelings of private friendship naturally revert to the virtues of the deceased, the having assisted in the creation of such an Academy, and promoted its usefulness by a long, steady and active course of scientific labours, forms the strongest claim which his memory can possess to the grateful reminiscences of the public. This is indeed pre-eminently the case in the present instance; so large a mass of the early writings of Mr. Say having been published in the Journal of the Institution as in a great measure to identify him with it. The same efforts by which our departed fellow member raised the reputation and extended the usefulness of the body to which he belonged, formed the foundation of his own; and it is perhaps not employing too strong a phrase, to allege, that the scholar and his infant association found their way to fame together.

The family of our deceased fellow member had been settled in Pennsylvania from the time of its first colonization. His ancestors by the father's side are understood to have been Huguenots, who emigrated to England in pursuit of religious liberty: and his lineal predecessor, in the fourth degree of proximity, came from England with William Penn, accompanied by others of his family. The integrity and activity of these high principled and determined men, were rewarded by a liberal share of the divine blessing upon the external circumstances which surrounded them. They and their descendants generally lived to an extreme age, surrounded by peace and abundance, and enjoying the confidence and respect of their fellow citizens within the colony. His grandfather, Thomas Say, was a very patriarchal man. Educated in the Episcopal church, by his step father Paschall and his uncle Robinson, he was united, early in the eighteenth century, to the religious society of Friends. While in that connection, his personal conduct and character were such as to acquire for him a high estimation among his friends and acquaintance. The confidence reposed in him was exemplified by his being frequently employed in the care of the estates of deceased persons, and in the guardianship of orphans; both of which trusts he conducted with great satisfaction, retaining, long after, the friendship of the parties he had served. It was also exhibited in the respect paid to his religious character; although, as appears by a memoir of his life, published by his son, he differed from the religious association with which he was connected in certain doctrinal principles, inclining strongly to universalism. Dr. Benjamin Say, the immediate progenitor of the subject of these notes, was long known in this city as a skilful and benevolent practitioner of medicine, and enjoyed in that capacity a large share of public confidence and patronage. Having been connected with military proceedings during the war of independence, he joined that seceding portion of the society of Friends, known by the name of Free Quakers.

The immediate subject of our memoir was born July 27th, 1787, and was the eldest son of Dr. Benjamin Say and Anna, his first wife, a daughter of Benjamin Bonsall, Esq. of Kingsessing. In his early youth he was brought up in rigid compliance with many of the peculiar observances of the society of Friends or Quakers. He received a considerable part of his education at their school at West town, in Pennsylvania; and the remainder of it generally at the institutions of that religious body. He manifested, at this period, a remarkable docility of temper, a profound and confiding respect for his parents and teachers, and a great fondness for study. He pursued, by his own choice, an extended course of reading among the writers of his own language; having compiled, at one time, a large volume of poetical extracts, arranged alphabetically.—These latter pursuits however, were not well suited to the bias of his mind; and, he soon forsook poetry altogether, devoting himself exclusively to the accumulation of fact or natural truth.

At an early period of his life, a near family connection with the celebrated naturalist, William Bartram, of Kingsessing, induced the young Say, together with several of his acquaintance, to devote a considerable amount of time to collecting objects of natural history for their venerable friend's museum. This occurrence seems to have fixed his destiny: the student, young as he was, felt himself at once in his proper sphere. He immediately commenced the study of natural history; a pursuit which, though occasionally suffering a temporary interruption, was never wholly laid aside for the remainder of his life. The natural gaiety of youth, the attractions of fashion, the multiform allurements which surround a young man of easy fortune, and even the serious claims of a commercial establishment, were all capable of occupying his mind but for a short season, to be soon superseded by those boundless cravings for knowledge which an Almighty Power had placed within his breast. In the most elated moments of youthful excitement, he would abruptly relinquish the occupation in which he was engaged, if an opportunity occurred for enriching his collections with an insect; and when, at a subsequent day, in compliance with the earnest wishes of his father, he entered into commercial engagements, the future naturalist was found by his friends occupied with those pursuits for which nature had designed him, and leaving the details of business to others. The commercial efforts proved unsuccessful; and Mr. Say, deprived of his patrimony, instead of endeavouring to repair the loss, resolved to devote himself exclusively to natural history. From this

may be dated the commencement of his purely scientific career: he now began to consider science as a profession. As has so frequently been the case in the lives of learned men, the loss of worldly prosperity seemed the road to higher intellectual distinction and more enlarged usefulness.

The studies of the youthful naturalist, about this period, underwent a temporary interruption, from his service as a volunteer in the last war between our country and England. In common with several of his friends and relations, he became a member of the first troop of city cavalry, and in that capacity proceeded to Mount Bull; where he remained for some time during the years 1812 and 1813. The breaking up of this military post, however, soon left him at liberty to return to the pursuits for which he felt so strong an attachment.

In pursuance of his recent determination, he had already devoted considerable labour to the study of natural history, and the collection of the natural productions of our country, when he found the arena of his usefulness suddenly extended by the formation of this Academy. When, on the 25th of January, 1812, the little association which had previously employed itself in pursuits of a more private character, agreed to assume the style and character of our present institution, it was considered of importance that Thomas Say, though absent from the meeting, should be assumed as an original member. The compliment thus paid to a modest and retiring man, shows, as was intended, the value which was then set upon his adhesion by the six others who thus associated him to their number. How amply his subsequent course justified their selection, all the volumes of the Journal, and all the foreign correspondence of the Academy can abundantly testify.—He came among them a disciplined naturalist. Such was the effect of private study, that his subsequent acquaintance had no opportunity of witnessing the infancy of his scientific powers. His elementary knowledge was complete; his acquaintance with classification adequate, and his power of observing and discriminating, accurate and ready. He was at once prepared for the difficult and laborous task of describing and cataloguing American productions in natural history. He was fully fitted at all points for academic usefulness.

In the tasks undertaken by Mr. Say, either separately or with his colleagues, almost every thing was to be done. The study of the invertebral animals was to be introduced to the notice of our citizens. A taste for natural history was to be created and diffused.—The departments of botany and ornithology, almost the only ones which then received a share of attention in Philadelphia—the one almost confined to the elementary pursuits of a few students of medicine, or young people from schools, ambitious of a more liberal education than they then received; the other, to the curious and admiring readers of Wilson, were to be furnished with a rallying point; and the popular attention was to be at the same time directed to the various other branches. It was not that the studies selected by Mr. Say, then incomplete, were to be further extended: the studies were to be created, and the students induced to prosecute them.

For these purposes, his efforts were truly unremitting. Besides the very large amount of his writings for the Journal, he was attentive and regular in his presence at the meetings; and during the intervals may be said to have been always at his post at the academy. Those who were then in the habit of visiting the building, will abundantly recollect the uniformity with which he was to be found there. Others might attend more or less, as service on committees, leisure, or the wish to pursue particular inquiries might demand or render convenient; but Mr. Say was always added to the number, always employed in the one unremitting, untiring, unmodified pursuit, the study of natural history. The value of such assiduous attendance, by such a man, may be easily imagined. Those who were disposed to visit the establishment, were at all times certain of agreeable society; for Mr. Say was ever attentive to all reasonable calls for conversation, so much so as even to surprise his friends. The books and specimens were, through his means, of ready access, while at the same time, his presence was a check upon confusion, loss and disorder. His uniform attendance operated as a powerful encouragement to the practice of studying within the walls of the institution.

This indefatigable and eminent naturalist was at all times ready to bestow the fruits of his own researches upon those of his friends who felt an interest in similar pursuits. In this manner he was incalculably serviceable to young students in natural history, by his advice and assistance; feeling far more anxious to extend the sphere of science in his country, than to increase his own fame. This generosity in bestowing upon others the results of his own industry, so highly characteristic of true genius and real love for science, might perhaps be referred, in part, to a sense of his own strength.—He had reputation to spare, and could hardly avoid feeling aware, that the inquirer who grew in science must inevitably form a higher estimate of the teacher of whose merits he thus became a better judge. The effect of Mr. Say's liberality of disposition, with his amenity of manner, was peculiarly fascinating, and tended forcibly to produce, in the same individuals, a combined feeling of love for the science, and for the naturalist who had thus gained their affections.

In May, 1817, the publication of the Journal was commenced, and Mr. Say continued, during the next ten years, to be one of its steadiest and most laborious contributors. Whatever contingencies might take place in regard to the services of others, his assistance, personally, when in the city, and at all times by the labours of his pen, was never wanting. In the autumn of that year, the expedition to Florida was organized, for the purpose of procuring objects of natural history. The party consisted of Messrs. Maclure, Ord, Say and Peale; who spent the winter in that country, and collected a large number of specimens, with descriptions of many of which they afterwards enriched the Journal. In 1819 and 1820, the celebrated expedition to the Rocky Mountains took place, the particulars of which are before the public, so far as to render it unnecessary to enter into details in the present paper, particularly as these are not scientific in their character. His learning, his patient industry, and the confidence reposed in him by all the officers of the detachment, are visible in every page of the narrative; and the large portion which he contributed to the work is acknowledged by the editor. This embraces the whole of his favourite department, the invertebral animals, together with a great variety of additional subjects, to which, from circumstances of various kinds, it was convenient that Mr. Say should direct his attention. In the expedition to the sources of St. Peter's River, &c., performed in 1823, at least equal labour, in proportion to the time employed, was bestowed by our late member upon the collection of materials; although a portion of the preparation for the press was saved him by his friend, W. H. Keating, Esq. the editor.

During the period of our narrative, honors from abroad came thick upon him. On these, however, he set but a limited value, except where they were the means of extending or increasing a knowledge of natural history. His correspondence with distinguished foreign naturalists occupied a large portion of his time, although constantly confined to matters of science; and thus superseded much of the letter writing which would have been dictated by private friendship.

In the year 1825, at the foundation of the celebrated settlement of New Harmony, Mr. Say removed to that place, at the request of his friend William Maclure, Esq. His residence there, as well as that of several other learned men, should not be confounded with the ec-

centric experiment of which, by the agency of Mr. Robert Owen, the same place was made the theatre.—It was for the purpose of constituting a school of natural science under the patronage of our liberal President. By the munificence of that distinguished individual, he enjoyed, in the wilds of the far west, all the advantages of a splendid library, abundant facilities for making collections, and a ready printing press. It is unfortunate, that some of his elaborate papers are not only rendered difficult of access to the scientific world, but exposed to the risk of being separated or destroyed, by their committal to the evanescent pages of the newspaper of the place, the New Harmony Disseminator. To this it may be added, that the columns of that paper suffer under the dislike and disapprobation of all that large portion of the community who stand opposed to the very peculiar doctrines in relation to religion, politics, and domestic life, which were introduced to the public through its agency. Owing to these causes, naturalists are deprived of the use of many of the most valuable papers of Mr. Say, which it were to be wished might be republished by some one of the learned societies which are proud to acknowledge him among their members.

The scientific world is, however, in possession of a considerable amount of matter which was the fruit of his industry while at New Harmony. It was there that he composed the second and third volumes of his splendid American Entomology, of which the first volume had already appeared, and the six numbers of his Conchology. The volumes of the Entomology were published in Philadelphia—the others in Indiana.

It was while at New Harmony that Mr. Say's domestic happiness was enhanced by his marriage with Miss Lucy W. Sistare, of New York, a lady in every way qualified to add to the felicity of such a man. In addition to many elegant accomplishments, Miss Sistare possessed the advantage of a fondness for the same pursuits, and great readiness and neatness with the pencil; a talent which was employed to the advantage of the beautiful works which we have just named.

Besides the elaborate description of a number of natural objects collected at New Harmony, and also in Mexico, during the tours in that country made by Mr. Maclure, our fellow member found himself, at this late period of life, again involved in the cares of business and the superintendance of property. Amid the chaos of mind which the settlement presented, Mr. Maclure felt the value and necessity of old and tried friendship, tested honour and untiring industry, in the care of his vast estates. In none could he confide with more unhesitating promptitude than in the subject of our memoir; and he who in early youth had sacrificed his own property to the pursuit of science, was willing, in maturer age, to devote his talents to the care of that of his friend. During the frequent periods of absence, which the state of Mr. Maclure's health or the various scientific objects he had in view rendered necessary for several years, he left his large property in the care of Mr. Say; a circumstance which materially added to the labours of the latter, and loaded him with a feeling of responsibility to which the middle of his life had been a stranger.

Amid these accumulating tasks and this honorable charge, the termination of his studies was now gradually approaching. The hand of death was busy upon the Wabash. The season was one of unusual mortality; and the ordinary and general causes of disease could only co-operate with the severe and devoted industry of the naturalist. Mr. Say's habits of steady and protracted application, excessive abstinence and loss of sleep, had long before this period exerted an injurious influence upon his health, exhibiting their effects in repeated attacks of fever and dystentery; and when, in 1833, he paid a short visit to his friends in Philadelphia, for the conjoined objects of health and science, the ravages of sickness were but too visible. Still, those who knew him were not conscious that it was then for the last time that he visited his native city, or the walls of his beloved Academy. He recovered from one attack however, to be subsequently prostrated by another; and finally, the closing malady appeared on the 20th of September. This is described as a disease commencing with bilious symptoms, and closing with those of typhus fever with a highly nervous character, accompanied with dysentery. On the 8th of that month he appeared to improve; but on the following day his debility increased in an alarming manner; and on the 10th he sunk into the arms of death by an easy dissolution.

Thus perished, while yet in the vigour of his years, an individual on whom creative wisdom appeared to have stamped in the strongest manner the characters of a master mind in the study of the works of God. His last days cannot be said to have passed away without regrets. Declining health and laborious cares had slowly undermined his spirits, a tendency to depression exhibited itself, and he appeared to feel, though surrounded by friendship and munificence, that he had not the independence to which his extraordinary talents and industry entitled him. The narrative is fruitful of instruction; yet the sketch of his scientific and personal character, ought, perhaps, to occupy a larger share of our sheets than we have devoted to it.

The communications of Mr. Say to natural science are numerous and of considerable bulk. We have appended a list of all those we have been able to obtain; with the double object of giving the best view in our power of their number and variety, and of enabling the future inquirer to find them with more facility. They are scattered through a variety of publications, not all devoted to natural history, and one of these even a newspaper; the student finds it impossible, without considerable exertion, to avoid overlooking some of them; and it is too much to be feared that individual memoirs are irrecoverably lost. Their number will probably surprise even some of his acquaintance. No estimate of their value, and the labour necessary to produce them, can, however, be founded upon their simple bulk; nor can they be compared to others upon such a principle. If we take into view the extreme labour which he uniformly bestowed upon his productions, first, to insure their accuracy, and then to compress them within the smallest possible space, the amount of work executed by this indefatigable writer will appear enormously augmented. But it is not by the rules of arithmetic that the labors of Mr. Say are to be judged in any respect. To form a just idea of the space in public utility occupied by our deceased fellow member, it would be desirable to make an estimate of the vacuities which existed in American science, of the judgment which he formed of them, and of the success of his endeavors to fill them. To do this in an adequate manner would require an extended grasp of the mind. He who attempts it should possess an enlarged and accurate acquaintance with the subject, the power of forming comprehensive views, and judgment and ability in expressing the results. To this rare combination, the gift of a few leading minds, your reporter fully feels that he possesses no claim; but it would be committing a disrespect to your nomination, to omit presenting such an outline as he is enabled to prepare.

We have seen that the larger lacunæ in the zoology of our country, embraced at the time when Mr. Say began his labours, the immense and obscure masses of amphibia, fishes and the invertebral animals. The fishes were principally left to the researches of Dr. S. L. Mitchell and Mr. Lesueur. The amphibia were passed by till they subsequently attracted the attention of Mr. Le Conte, Professor Green, Dr. Harlan, and others. It was in the immense range of the invertebrals that Mr. Say exhausted his labors; and among these it may be said, as of a former writer, that he left scarce any department untouched, and none that he touched unimproved. His descriptions of species are most numerous

among the annulosa and the mollusca: although he also made investigations among the radiata, as appears from the list of his publications, and among the entozoaria. It is not to be supposed, that he exhausted any of these departments: the stores of nature within our country are too extensive, and much doubtless remains for future observers. Yet he described the large and laborious numbers which serve for the general materials of classification; he constructed the extended and accurate map, to which the task of making local additions is easy, but which forms the necessary and only guide to those who would make further admeasurements. It is not that there is no more gold in the mine; but in raising his own ore, Mr. Say has opened the shafts and galleries, pointed out the veins, and indicated, by his example, the best manner of working them. He has laid down the broad masses of colouring which, however they may be augmented and retouched by the persevering pencil of the future artist, must still form the basis, and in very numerous cases the perfection, of the picture. Every familiar object in these departments, that frequently met the eye, but produced a feeling of dissatisfaction because no description or place for it was to be found in the writers on natural history, received its character from his hands. His task was that of Adam, to name the animals as they passed before him.

His modesty at first induced him to attempt few and isolated species and departments of small extent; and as time gave him experience of his powers he ventured farther. A few scattered insects and shells, ascertained to be undescribed with great labour and precaution, first received their characters and names from him.—Next, he undertook the Crustacea of the United States, which he described and classified. He then extended his labour to a larger number of shells, selecting those of the land and the fresh waters. Next came the detached and still limited groups of the Thysanouræ, the Arachnides and the Myriapodæ; and then he finally entered among the vast masses of the true insects. His publications in this field of toil principally relate to the Coleoptera, Diptera, Hemiptera, Neuroptera and Hymenoptera. His account of the Neuroptera is liable to be overlooked from the circumstance of its publication in a journal of medicine instead of one devoted to natural history. When the late Dr. Godman published the Western Quarterly Reporter, at Cincinnati, Ohio, he was desirous of enriching his work with contributions on natural science, and was gratified with the receipt of this valuable paper from Mr. Say, without which our large and conspicuous insects of this order would remain undescribed. Our deceased fellow member had now achieved so much of his task that he could afford to be desultory; and his pieces from this period assume a more diversified character. His monograph on the genus Cicindela is much admired. His share in the history of the two expeditions by Major Long, is truly multifarious. Besides the departments which he considered peculiarly his own, it embraces, as we have already had occasion to observe, a very large amount of matter foreign to his ordinary habits of study, and requiring a different manner of composition. We may here, without extravagance, admire the talents of the man, who, in a species of writing which for many years it had been his persevering study to avoid, should please the public with the fluency and ease of diction, which are found in some popular chapters contributed by him. Some of the most interesting portions are those which describe the manners of the Indians. He is the historian of all the facts that were collected in those districts which he traversed with a small detachment of troops under his separate command; he obtained, although not professing philology, the vocabulary of the Killisteno language; and on the expedition to the Sources of St. Peter's River, he made the whole of the botanical collections, which afterwards formed the basis of a memoir appended by the late Mr. De Schweinitz to the published narrative. In fossil zoology, his description of new species of the Crinoidea is considered highly valuable. Some other matter in this department, in which America until lately presented such a mass of unknown objects, will be found in the catalogue of his papers. Our fellow member, Dr. Morton, informs me that he was himself induced to undertake the study of the New Jersey marl fossils, in consequence of the perusal of Mr. Say's paper treating on that subject, in the 1st and 2d volumes of Professor Silliman's Journal. It would seem that his valuable papers on American shells, published in the New Harmony Disseminator, and communicated to me by the politeness of Mr. Poulson, are in reality very little known to naturalists. Some other publications were made by Mr. Say in that periodical; it appearing to have been his first object in this as in many other instances. to procure a public record of his papers in print, so as to establish his claims to the date of his discoveries, while at the same time he obtained duplicates to transmit to his learned correspondents; leaving it to subsequent times to republish them, and thus secure their wider diffusion and more easy access.

The character of Mr. Say was in every way singularly fitted for the task which he thus made the business of his life. He was gifted with a strong intellect, accurate powers of observation, vast assiduity, a freedom from those unsettled wanderings of the mind which are so frequently the bane of genius, and an enthusiastic attachment to the subject of his studies. Such was the ardour of his perseverance, that for a long period he actually lived at the Academy, sleeping within the walls, and only leaving the institution when necessary to obtain his meals. The hours of refreshment were forgotten, and sleep unhesitatingly sacrificed, not as an occasional exertion, but as a permanent and persevering habit. His extraordinary power of concentrating his industry, had an effect in producing the peculiar style of his pieces. The manner of writing in which he most delighted, was that of the utmost abridgment of which the subject was capable, cutting off every unnecessary word. It was not that he was incapable of a fluent style, for various parts of his writings demonstrate the contrary, such as some of his contributions to the narrative of the Expedition to the Rocky Mountains; but he seemed to think it an injustice to the reader and to science to detain men from knowledge with the smallest redundancy of language. At the same time, this severe judge was far from criticising others with the same rigour which he exercised towards himself; and readily forgave the luxuriance of style in their works. His own manner, when he indulged in his beloved brevity, was certainly liable to the objection of difficulty to untutored readers; but still more, perhaps, to the risk of alarming students by its apparent obscurity, than to the reality, as the knowledge which was requisite was always actually present, though comprised in few words. It is unnecessary to add, that to some profound naturalists this abridged style is a recommendation.

In philosophy he was an advocate for that doctrine which attached exclusive importance to the evidence of the senses. Fact alone was the object which he though worthy of his researches. Chains of reasoning or general principles he thought so frequently fallacious, as to constitute an employment for the human intellect of secondary and even doubtful utility. We will not here stop to discuss this celebrated opinion.—The influence which it has exerted through the minds of Mr. Say and others has contributed sensibly, within the city of Philadelphia, to stimulate our youth to the pursuit of science in preference to that of literature.—It cannot therefore be considered as acting injuriously to this Academy, which should be considered as a great school of observation and inductive science.

The natural temper of our deceased member was one of the most amiable ever met with. The phrase was

frequent in the mouths of his intimates, that "it was impossible to quarrel with him." His great respect for his parents, and his compliance with their wishes, have been already mentioned. He was repaid, notwithstanding his retired life and his exclusive devotion to science, by a singular strength of attachment on the part of his friends; and we have already spoken of the confidence of Mr. Maclure. His modesty was so retiring, and the wish that he frequently expressed "to save trouble" to others so great, that to men in the habit of living much in the world they might perhaps appear incredible. The contrast of these with the manners of the times was occasionally so remarkable as almost to amount to eccentricity and satire.

To those who have not seen him, it may be interesting to add, that he was tall, muscular, but spare, apparently endowed, before his health was injured by repeated illness, with considerable strength. This enabled him better to struggle with the fatigues of toilsome journeys and the wasting inactivity of study. His complexion was dark, with black hair. The best likeness of him is a small one, by Mr. Wood, in the possession of his family.

In closing an account of the life of our deceased founder, it seems consonant with the spirit of our institution to make but little comment. The fact and truth of which it is our habit to be in search, shine with as much clearness and instruction in the contemplation of a life passed in the augmentation of natural science, as they do in any other department of knowledge. The institution which is now lamenting his death, is in a great measure the work of his hands. We can say, as was written of the architect of a splendid temple, "Si monumenta quæris, circumspice."

Extracts from the constituent Minutes of the Academy of Natural Sciences.

PHILADELPHIA, Saturday Jan. 25, 1812.

John Speakman, Esq. having taken the chair, Camillus Macmahon Mann, Doctor of Medicine, was called by the meeting, unanimously, to discharge the duties of Secretary.

Present, besides the said Chairman and Secretary.
Gerard Troost, Esq. Med. Doctor,
John Shinn, jr. Esq.
Jacob Gilliams, Esq.
Nicholas Parmantier, Esq.

Who conjointly having proceeded to initiatory business, as well for themselves, as for Mr. Thomas Say, absent.

Resolve—The gentlemen present agree to form, constitute and become a Society for the purpose of occupying their leisure occasionally, in each other's company, on subjects of natural science, interesting and useful to the country and the world, and in modes conducive to the general and individual satisfaction of the members, as well as to the primary object, the advancement and diffusion of useful, liberal, human knowledge. And the said gentlemen present pledge themselves to the formation and persevering support of this said intended society accordingly.

Determined.

Signed by Thomas Say, Camillus M. Mann, Secry.
John Speakman, N. I. Parmantier,
G. Troost, J. Gilliams.

PHILADELPHIA, March 17, 1812.

* *Academy of Natural Sciences.*

Thomas Say, Gerard Troost, Jacob Gilliams, John Speakman, Nicholas Parmantier, John Shinn, jr. and Camillus Macmahon Mann—Present—all the foundation members.

* The name "Academy of Natural Sciences," was first assumed at this meeting.

Every individual of the present members, founders of the Academy of Natural Sciences, has equally felt that an association of this nature, tendency, operation and bearing, free and perpetually occlusive of political, religious and national partialities, antipathies, preventions and prejudices, is necessary for the easier and more perfect acquirement and the better progress of natural knowledge, wherever it may be desired.

We will contribute to the formation of a Museum of Natural History, a Library of Works of Science, a Chemical Experimental Laboratory, an Experimental Philosophic Apparatus, and every other desirable appendage or convenience for the illustration and advancement of natural knowledge, and for the common benefit of all the individuals who may be admitted members of our institution in the manner herein to be stated, or stated already.

Camillus M. Mann, *Secretary.*

Signed by Thomas Say, N. I. Parmantier,
J. Gilliams, G. Troost,
John Speakman,

LIST OF THE PAPERS AND OTHER WORKS OF MR. SAY, SO FAR AS ASCERTAINED.

Journal of the Academy of Natural Sciences.

VOL. I.

Description of Seven Species of American Fresh Water and Land Shells, not noticed in the systems.

Decriptions of several new species of North American Insects.

Some account of the Insect known by the name of the Hessian Fly, and of a parasitic Insect that feeds on it.

On a new genus of the Crustacea and the species on which it is established.

An account of the Crustacea of the United States.

Descriptions of New Species of Land and Fresh Water Shells of the United States.

Account of two New Genera, and several New Species of Fresh Water and Land Shells.

Notes on Professor Green's paper on the Amphibia.

Observations on some of the Animals described in the Account of the Crustacea of the United States.

Appendix to the Account of the Crustacea.

Description of a New Genus of Fresh Water Bivalve Shells.

Description of three New Species of the Genus Næsa.

VOL. II.

Descriptions of the Thysanouræ of the United States.

Descriptions of the Arachnides of the United States.

Descriptions of the Myriapodæ of the United States.

Descriptions of Univalve Shells of the United States.

Account of some of the Marine shells of the United States.

Description of a Quadruped belonging to the Order Rodentia.

On a South American species of Œstrus, which inhabits the human body.

Descriptions of Univalve Terrestrial and Fluviatile Shells of the United States.

VOL. III.

Descriptions of Dipterous Insects of the United States.

Descriptions of Coleopterous Insects collected in the Expedition to the Rocky Mountains. [229 pages, 356 species. Continued into vol. iv.]

VOL. IV.

Account of some of the Fossil shells of Maryland.

On the Fresh Water and Land Tortoises of the United States.

Description of three New Species of Coluber inhabiting the United States.

On two Genera and several Species of Crinoidea.

Descriptions of New Hemipterous Insects collected in the expedition to the Rocky Mountains.

A new Genus of Mammalia proposed, and a description of the species upon which it is founded. By T. Say and George Ord.

Description of a New Species of Mammalia, whereon a New Genus is proposed to be founded. By T. Say and George Ord.

On a new species of Modiola.

VOL. V.

Descriptions of New Species of Hister and Hololepta inhabiting the United States.

Descriptions of some New Species of Fresh Water and Land Shells of the United States.

On the Species of the Linnæan Genus Asterias inhabiting the coast of the United States.

Descriptions of New Species of Coleopterous Insects inhabiting the United States.

Descriptions of Marine Shells recently discovered on the coast of the United States.

On the Species of the Linnæan Genus Echinus inhabiting the coast of the United States.

Descriptions of North American Dipterous Insects.

Descriptions of New North American Hemipterous Insects, belonging to the first family of the section Homoptera of Latreille.

Contributions of the Maclurian Lyceum of Philadelphia.

Remarks on some Reptilia of Dr. Harlan.

Note on Le Conte's Coleopterous Insects of North America.

Descriptions of New Species of Hymenoptera of the United States. [Not completed.]

Annals of the Lyceum of Natural History of New York, Vol. I.

Descriptions of New American Species of the Genera Buprestis, Trachys and Elater.

Western Quarterly Reporter of Medical, Surgical, and Natural Science; edited by John D. Godman, M. D., Vol. II.

Descriptions of Insects belonging to the Order Neuroptera, Linn., Latreille. Collected by the Expedition under the command of Major Long, [to the Rocky Mountains.]

Siliman's Journal, Vol. I.

Notes on Herpetology.

Observations on some species of Zoophytes, Shells, &c. principally fossil. [Continued into vol. ii. Contains the first account of New Jersey Marl Fossils.]

Philosophical Transactions of the Royal Society, 1819.

On the Genus Ocythoe; being an extract of a letter from Thomas Say, Esq. of Philadelphia, to Wm. Elford Leach, M. D. F. R. S.

American Philosophical Transactions, Vol. I. New Series.

A Monograph of North American Insects of the Genus Cicindela.

VOL. II.

Descriptions of Insects of the families of Carabici and Hydrocanthari of Latreille, inhabiting North America.

VOL. IV.

Descriptions of New North American Insects, and Observations upon some already described [Part of this paper was also printed in the New Harmony Disseminator.]

In the "Account of an Expedition from Pittsburg to the Rocky Mountains, performed in the years 1819 *and* 1820."

The whole department of Zoology; with the addition of various Memoirs, Narratives and Notes, incorporated into the body of the work. Besides what is published, it will be remembered that Mr. Say was robbed of a large mass of collections and papers.

In the "Narrative of an Expedition to the Source of St. Peter's River, Lake Winnepeek, Lake of the Woods, &c. &c. performed in the year 1823."

The notes of all that relates to the Zoology and Botany of the country traversed; as well as much of the matter relating to the Indians. Also, the greater part of the Appendix, viz: the article Zoology, in 124 pages; the specimens and other materials, which enabled Mr. de Schweinitz to compose the article Botany; and the Killisteno portion of the Vocabularies of Indian Languages.

In the American edition of Nicholson's Encyclopædia.

The new modelling of the whole department of Natural History, with the addition of all the American matter, including an extensive account of American Insects and Shells.

—

American Entomology, or Descriptions of the Insects of North America, illustrated by coloured figures from original drawings executed from Nature. Philadelphia Museum, vol. i. 1824; vol. ii. 1825; vol. iii. 1828; Glossary, 1825.

American Conchology, or Descriptions of the Shells of North America, illustrated by coloured figures, from original drawings executed from Nature. Six numbers and a Glossary. New Harmony, Indiana, 1830—1834.

Descriptions of New Species of Curculionites of North America, with observations on some of the species already known. New Harmony, Indiana, July, 1831.—Pamphlet.

In the New Harmony Disseminator, (communicated by C. A. Poulson, Esq.)

July 29, 1829.—Descriptions of some new Terrestrial and Fluviatile Shells of North America. Continued to Nov. 18th. Nine articles.

Dec. 30.—New Terrestrial and Fluviatile Shells of North America. Continued to January 29. Three arcles.

We are informed, that other publications were made by Mr. Say in the journal last named; but of these we have, as yet, been unable to obtain a list.

We understand that a lot has been purchased in this borough, for the erection of a large steam machine shop, for the manufacture of steam engines, rail road cars &c. We also learn that two enterprising young men intend erecting, early in the spring, a steam grist mill in this borough.—*Miners' Journal.*

HEALTH OF POTTSVILLE.—It is a remarkable fact, ascertained by the person who took the census, that there were on Tuesday last, only *three persons confined to their beds with sickness*, in the borough of Pottsville, containing a population upwards of three thousand souls.—And there is not a single deaf and dumb or blind person in the borough. The abave facts are worthy of record.—*Ib.*

STATEMENT OF DEATHS, WITH THE DISEASES AND AGES,

In the City and Liberties of Philadelphia, during the year 1834.

DISEASES.	Males.	Females.	Boys.	Girls.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Apoplexy	46	30	0	2	0	1	0	0	0	1	9	10	14	12	19	8	2	0	0	76
Abscess	7	5	5	2	3	1	1	0	1	1	0	2	1	1	0	0	1	0	0	12
Aneurism of Heart and Aorta	1	2	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3
Carotid Artery	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Asphyxia	5	3	5	2	7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8
Asthma	6	4	0	1	0	0	1	0	0	0	0	0	4	1	2	2	0	0	0	10
Atrophy	57	39	54	32	48	24	10	4	0	0	1	3	2	0	3	1	0	0	0	96
Angina Pectoris	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Amenorrhœa	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Bronchitis	69	52	59	43	56	21	16	8	0	1	1	0	2	2	5	5	3	1	0	121
Burns	9	18	9	13	2	4	6	4	4	2	1	1	3	0	0	0	0	0	0	27
Consumption	322	314	41	61	23	20	14	8	3	34	190	143	90	53	34	18	5	1	0	636
Croup	47	34	47	32	32	16	22	9	0	0	0	0	2	0	0	0	0	0	0	81
Cramp of the Stomach	2	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Convulsions	157	120	143	114	200	23	25	4	2	3	4	10	3	3	0	0	0	0	0	277
Puerperal	0	3	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
Cancer	9	26	2	1	0	0	1	0	1	1	2	5	8	9	5	3	0	0	0	35
Cachexia	2	3	0	0	0	0	0	0	0	0	0	0	0	1	3	0	1	0	0	5
Caries of the Spine	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
Congestion	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
of the Brain	19	18	7	8	10	1	1	1	1	1	5	7	6	2	1	1	0	0	0	37
Lungs	6	2	3	0	2	1	0	0	0	0	3	0	1	0	0	1	0	0	0	8
Child-bed	0	5	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	0	5
Casualties	21	3	7	0	1	0	3	1	1	1	3	7	3	1	2	1	0	0	0	24
Concussion of the Brain	1	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2
Spine	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Colic	3	2	1	1	2	0	0	0	0	0	2	0	0	0	0	1	0	0	0	5
Chorea	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Compression of the Brain	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Cholera	100	51	7	5	0	1	4	3	2	2	28	31	37	26	14	2	1	0	0	151
Morbus	40	13	6	1	1	0	1	2	1	2	13	11	12	4	2	2	2	0	0	53
Infantum	206	171	206	171	248	101	25	5	0	0	0	0	0	0	0	0	0	0	0	377
Dropsy	44	59	16	12	4	2	7	7	1	7	7	18	12	13	12	12	1	0	0	103
of the Brain	100	98	99	97	80	59	36	16	5	0	1	1	0	0	0	0	0	0	0	198
Breast	26	25	4	8	2	1	4	2	2	1	8	9	4	8	6	4	0	0	0	51
Pericardium	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Debility and Decay	109	98	80	58	127	5	5	0	0	1	3	7	8	8	15	18	7	2	1	207
Disease of the Brain	14	13	10	8	6	3	3	3	2	1	3	1	2	2	1	0	0	0	0	27
Throat	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Chest	2	3	1	1	1	1	0	0	0	0	1	0	1	0	0	0	0	1	0	5
Lungs	3	1	2	1	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
Heart	15	14	1	2	2	0	0	0	1	0	4	8	1	6	2	5	0	0	0	29
Stomach	2	4	0	0	0	0	0	0	0	0	1	1	1	0	2	1	0	0	0	6
Liver	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Kidney	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
Bowels	2	3	2	2	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0	5
Spine	1	4	0	3	2	0	0	0	0	1	0	1	0	0	0	0	1	0	0	5
Hip	3	1	2	1	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	4
Knee Joint	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Uterus	0	5	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	5
Bladder	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
Glands	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Rectum	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Drowned	53	7	17	1	0	0	2	6	7	3	14	13	12	2	1	0	0	0	0	60
Dysentery	42	28	22	13	13	9	5	5	3	0	6	6	6	5	8	3	1	0	0	70
Diarrhœa	60	63	33	40	41	17	5	6	2	2	4	15	7	5	8	6	4	0	1	123
Drinking Cold Water	4	0	1	0	0	0	0	0	0	1	0	0	2	0	1	0	0	0	0	4
Diabetes	2	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Epilepsy	5	7	3	5	2	1	1	2	1	1	2	1	0	0	1	0	0	0	0	12
Erysipelas	10	10	5	2	5	2	0	0	0	0	2	3	2	2	2	2	0	0	0	20
Enlargement of the Heart	6	2	3	0	2	0	0	0	0	1	2	1	0	1	0	1	0	0	0	8
Breasts	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Spleen	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Eruptions	3	1	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Exposure to Cold	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Effusion on the Brain	6	1	0	0	0	0	0	0	0	0	2	1	2	2	0	0	0	0	0	7

(*Continued on next page.*)

STATEMENT OF DEATHS—*CONTINUED.*

DISEASES.	Males.	Females.	Boys.	Girls.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Effusion on the Lungs	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Excessive heat	13	3	0	0	0	0	0	0	0	0	2	7	6	1	0	0	0	0	0	16
Fever	23	12	15	4	6	4	4	3	2	0	2	7	2	2	2	1	0	0	0	35
Bilious and Remittent	25	33	11	15	2	3	6	4	3	8	12	8	2	5	2	3	0	0	0	58
Intermittent	2	1	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	3
Typhus and Nervous	38	23	10	5	0	1	1	4	6	3	23	10	8	3	1	0	1	0	0	61
Scarlet	38	45	36	42	9	15	37	15	2	0	2	2	1	0	0	0	0	0	0	83
Puerperal	0	19	0	2	0	0	0	0	0	2	9	6	2	0	0	0	0	0	0	19
Hectic	4	1	1	0	0	0	0	0	0	1	0	3	0	1	0	0	0	0	0	5
Brain	1	2	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	3
Worm	1	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Congestive	1	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Peritoneal	3	2	0	1	0	0	1	0	0	0	1	1	0	1	1	0	0	0	0	5
Inflammatory	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Fracture	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
of the scull	3	1	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	4
Fungus Hæmatodes	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
Gout	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Gravel	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Hæmorrhage	18	16	7	4	8	0	2	0	0	1	5	5	10	2	1	0	0	0	0	34
Hooping Cough	26	22	26	22	23	9	14	1	0	1	0	0	0	0	0	0	0	0	0	48
Hernia	3	3	1	0	0	0	1	0	0	0	1	0	1	0	2	1	0	0	0	6
Hydrophobia	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Inflammation	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
of the Brain	65	39	45	29	24	18	16	4	7	5	6	9	9	3	2	1	0	0	0	104
Throat	12	7	6	6	3	2	4	2	1	0	3	2	0	2	0	0	0	0	0	19
Wind-pipe	1	1	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Lungs	90	79	52	56	56	21	17	7	2	5	16	9	5	6	17	4	3	1	0	169
Breast	9	6	8	6	5	4	2	3	0	0	0	0	0	0	0	0	1	0	0	15
Heart	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Pericardium	1	3	1	2	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	4
Liver	20	17	4	1	3	0	1	1	0	0	6	9	6	5	6	0	0	0	0	37
Stomach	19	22	9	6	8	1	1	0	0	5	4	7	2	4	5	2	2	0	0	41
Bowels	62	49	32	20	26	10	8	3	3	2	16	19	6	8	6	3	1	0	0	111
Kidney	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	3
Uterus	0	2	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Bladder	3	3	0	1	0	1	0	0	0	0	0	2	1	0	1	1	0	0	0	6
Mucous Membrane	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Spinal Marrow	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Veins	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Introsusception	0	2	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Inanition	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Intemperance	19	9	0	0	0	0	0	0	0	0	5	10	10	3	0	0	0	0	0	28
Insanity	1	3	0	1	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	4
Irritation of the Brain	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Spinal Marrow	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Intestines	2	2	2	2	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Injury of the Brain	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Abdominal Viscera	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Influenza	2	1	1	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3
Jaundice	6	4	4	2	3	2	1	0	0	0	0	1	2	0	0	1	0	0	0	10
Laudanum to excess	3	2	2	1	3	0	0	0	0	0	0	1	0	0	0	1	0	0	0	5
Locked Jaw	7	2	3	1	1	0	0	1	0	2	1	1	2	0	1	0	0	0	0	9
Mortification	17	7	7	3	3	4	1	1	0	1	3	3	4	1	2	1	0	0	0	24
Measles	3	4	3	4	1	0	5	1	0	0	0	0	0	0	0	0	0	0	0	7
Mania a Potu	76	14	0	0	0	0	0	0	0	0	18	36	20	12	4	0	0	0	0	90
Malformation	7	5	7	5	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Murdered	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
Necrosis	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Old Age	23	45	0	0	0	0	0	0	0	0	0	0	0	0	3	14	36	13	2	68
Ossification of the Heart	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
Arteries	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Obs'tion. of Liver & bronchii	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Palsy	22	24	0	1	1	0	0	0	0	0	3	3	3	9	12	6	8	1	0	46
Pleurisy	5	6	0	2	1	0	0	0	0	1	1	2	1	2	3	0	0	0	0	11
Purpura Millaris	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Pempighus	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Polysarcia	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1

(*Continued on next page.*)

STATEMENT OF DEATHS—*CONTINUED.*

DISEASES.	Males.	Females.	Boys.	Girls.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110	Total.
Poison	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Rheumatism	5	7	1	2	0	0	0	0	1	2	2	2	3	1	0	1	0	0	0	12
Rickets	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Rupture of Blood Vessel	2	3	0	0	0	0	0	0	0	0	1	0	2	1	1	0	0	0	0	5
Aorta	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Intestines	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Still Born	174	134	174	134	308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	308
Small Pox	118	77	69	57	47	16	36	14	7	6	45	14	6	3	0	0	0	0	1	195
Scrofula	5	2	3	2	2	0	0	1	0	2	1	1	0	0	0	0	0	0	0	7
Syphilis	3	6	1	2	1	0	1	0	0	1	1	5	0	0	0	0	0	0	0	9
Softening of the Brain	3	2	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5
Suicide	8	1	1	0	0	0	0	0	0	1	3	2	3	0	0	0	0	0	0	9
Sudden	11	10	3	3	5	0	0	1	0	0	2	2	4	2	1	2	2	0	0	21
Suffocation	5	1	2	1	3	0	0	0	0	0	0	1	1	0	1	0	0	0	0	6
Scirrhus	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
of the Liver	1	3	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4
Stomach	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Pylorus	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Uterus	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Prostate Gland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Stroke of the Sun	7	1	1	0	0	0	0	0	0	1	1	3	2	0	1	0	0	0	0	8
Sarcoma, Medulary	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Stricture of the Colon	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Thrush	4	4	4	4	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	8
Teething	3	7	3	7	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	10
Tumour, Fungous	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
on the Throat	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Ulceration	2	2	2	0	1	0	1	0	0	0	1	0	0	0	0	0	1	0	0	4
of the Mouth	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Throat	2	2	1	0	1	0	0	0	0	0	2	0	1	0	0	0	0	0	0	4
Lungs	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Stomach	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Bowels	1	4	1	2	0	1	2	0	0	0	1	0	0	0	1	0	0	0	0	5
Sacrum	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Unknown	55	50	30	29	50	2	5	0	1	1	10	12	3	12	7	0	2	0	0	105
Varioloid	14	3	6	2	1	2	2	1	1	1	8	1	0	0	0	0	0	0	0	17
Vomiting	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Worms	4	2	0	2	0	3	1	2	0	0	0	0	0	0	0	0	0	0	0	6
Wounds	9	1	1	0	0	0	0	0	0	1	2	1	3	2	1	0	0	0	0	10
Total	2810	2263	1526	1258	1578	442	385	168	81	130	559	547	394	279	244	149	91	21	5	5073

Of the above there were Males of 20 years and upwards, 1284; under 20 years, 1526; Females of 20 years and upwards, 1,005; under 20 years, 1258.

There were 356 returns received at the Health Office, of persons who died in the Alms House of the City and Districts during the year; 519 People of Colour are included in the total number of deaths.

Agreeably to returns made at the Health Office and collected from 151 Practitioners of Midwifery, there were born in the City and Liberties, during the year 1834, 3937 Male, and 3635 Female children, making the total number of Births 7572, leaving a difference between the Births and Deaths of 2499.

DEATHS IN EACH MONTH OF THE YEAR.

	Adults.	Children.	Total.
January	200	212	412
February	160	194	354
March	181	234	415
April	160	152	312
May	154	167	321
June	121	210	331
July	261	506	767
August	163	311	474
September	219	214	433
October	347	242	589
November	146	165	311
December	177	177	354
	2289	2784	5073

By Order of the Board of Health.

HEALTH OFFICE, PHILADELPHIA, January 1st. 1835.

WM. A. MARTIN, *Clerk.*

HISTORICAL NOTES.

By Redmond Conyingham.

(*Continued from page* 118.)

When William Penn was preparing to return to Europe, he sent for the Chiefs of the Conestoga and Susquehanna Indians, and renewed his promise of protection. This occurred in 1701, therefore the Chief of the Conestoga Indians who addressed Sir William Keith in 1721, must have had a perfect recollection of all the circumstances attending the conference in 1701. In Proud's History of Pennsylvania, page 326, there is a note which is inaccurate. "The Conestoga Indians are the remains of a Tribe of the Six Nations." What follows is correct. "On the first arrival of the English in Pennsylvania, messengers from this Tribe came to welcome them with presents of venison, corn, and skins; and the whole Tribe entered into a Treaty of Friendship with the first Proprietary, *William Penn, which was to last as long as the Sun should shine or the waters run into the rivers.*"

The lines in italics may have been used in the Great Treaty, as the expression was a favorite one with the Indians. The Delawares on one occasion say "This Treaty shall continue as long as the Sun shall rise or the waters flow."

The writer of the pamphlet may have been acquainted with the fact that the Conestoga Indians held a conference with Penn's commissioners after their arrival, but entered into the Treaty of Friendship with William Penn only.

"In the latter part of this year, 1682, the Proprietary having finished his business with the Indians, undertook to lay out a plan for the city."

Proud's History, page 233, volume First.

This evidently alludes to the Great Treaty made with the Indians, as that would be his principal business.

By referring to the early histories of the Southern Colonies, it will be seen that in the year 1698 there existed no particular cause to compel the Indians to seek for an asylum in Pennsylvania; but in 1677, 1678, &c, the histories of Carolina and Virginia fully corroborate the statements of the Conestoga Indians, as to the time when they settled within this Province.

The Great Treaty having been made before Philadelphia was laid out, fully confirms public opinion in the conviction that it was made at Shackamaxan.

Have you reason to believe that a Treaty was regularly executed by Penn's commissioners with the Shawanese, before the arrival of William Penn?

It had rather the character of an Indian conference, which afterwards was ratified as a Treaty, at Shackamaxan, by William Penn. By the Shawanese and Delawares, the first was considered as the preliminary, the second as the confirmatory Treaty. When allusion was made to them, it was customary for the warriors of the Delawares and Shawanese to designate them as "the first Treaties made with Onas."

Proud's History of Pennsylvania, volume First, see note at the bottom of page 214, where part of Teedeuscung's speech is given.

"The first Treaties of Friendship made by Onas our Great Friend, deceased, with our Forefathers, when himself and his people first came over here."

Tradition tells us, that the commissioners of William Penn resided at Shackamaxan, and that the Indian conference with Markham, was held under the Elm in the summer of 1682, at Shackamaxan. If this be correct, there can be no doubt of the second conference having taken place on the same spot, for the Indians would select it in preference to any other situation, especially on account of the Tree. This explains why the Treaty was made under the Tree, in December, with William Penn; as the Tree would naturally be looked upon by the Indians with awe and reverence, and be considered by them as rendering the Treaty indissoluble.

The Indians who resided at Conestoga having removed from Virginia in the year 1677, still continued to hunt in their old ground, which caused a disagreement between them and the Southern Indians, in the year seventeen hundred and nineteen, and the loss of their king in a skirmish; they sent a deputation to Governor Keith, to request his protection. The Governor in the spring of 1721, went to Virginia to consult with the Governor of that state, as to the best plan for the security or *common safety* of the Indians; on his return to Philadelphia, he sent to the Indians at Conestoga a message by John Cartlidge, that he would meet them in Council on the fifth of July, and he sent a similar message by James Le Torte, to the Five Nations. In the afternoon of that day, Governor Keith held a conference with the Shawanese Chiefs of Conestoga Indians, whom he called *his children*, and the deputies of the Five Nations, whom he called *their Friends*, at Conestoga.

Governor Keith reminded the Conestoga Indians, that their oppressor, Nathaniel Bacon, had fallen a victim to his passions, in 1677, and that the present Governor of Virginia was their friend, and that "he requested them not to cross the Potomac in future, and that his Indians should not hereafter, disturb you in your hunting grounds." "I have made this agreement which you must keep. It is but a few years since William Penn spoke to your Nation in Council, which your Chiefs must well remember. Onas gave you good counsel, which you must never forget." "I leave you, and will see that you suffer no hurt, for you are my children. I will speak to you to-morrow in Council, and on the day after to the warriors of Seneka, Onondago, and Cayouga."

A Conestoga Chief replied to Sir William Keith.—"The Roots of the Tree of Friendship are planted deep, the tree top is high, the Branches spread in warm weather when the weary Indian sleeps beneath its shade, so is the Indian protected by Onas when danger

threatens from the deep and dark thicket." "The Fire water weakens our warrriors, we are become women." "We have not forgotten Onas, he promised us protection at Shackamaxan."

Governor Keith was not apprehensive of any danger from the Conestoga Indians, but as this was the first time he was to meet the chief warriors of the Iriquois, he took the precaution of having seventy horsemen well mounted and well armed, and on his return to Philadelphia, was received with much pomp by the Mayor and Aldermen, accompanied by two hundred citizens on horseback.

On pages 130 and 132 of Proud's History of Pennsylvania, will be found the proceedings in Council, on July 6th, 7th, and 8th, 1721. On page 136, Sir William Keith refers to the Treaty at Shackamaxan.

July 5th, 1721. The lands contiguous to the Indian town of Conestoga were described as exceeding rich, fine farms, orchards of fruit, wheat, barley, rye, flax, and hemp, raised in abundance without the aid of any manure.

Providential Escape.

In the year 1755, the Moravian Missionaries, Christian Seidel and Henry Frey, visited the Indians at Wyoming; on returning by the warriors path, as they descended Nescopeck Mountain in consequence of many trees having been blown down by a recent storm, they wandered from the path, and though at the time they suffered from anxiety, yet to this circumstance they were preserved from certain death.

A number of Indians had planted themselves in ambush in a laurel swamp, at the foot of the mountain, with the intention to tomahawk them, but the Christian Brethren missing the path, were graciously preserved. The Brethren found the path again near where Conyngham has since been built, and happily reached Guadenhatton in safety.

See Loskiel's Indian Missions, page 161, Chapter Twelve.

The Great Elm.

Frequent allusions are to be found in Indian speeches to this Tree, as "The Tree of Friendship," "Tree of Peace," "The Great Tree," &c.

One of the most striking is contained in the speech of Sassoanan, a Chief of the Delawares, in 1715.—"Let the Peace be so firm, that you and us joined hand in hand, even if *the greatest Tree* falls, it shall not divide us."

A Conestoga Chief in 1701, said "As long as the Tree stands the path will be open and the hatchet unstained." Again—"Peace shall last whilst the Tree stands." "The path of the Indians is open to the Tree." "The poor Indian hunted for shelter but could find none; he went to the Great Tree, and found a resting place." "The Branches of the Great Tree hang over the path of the Indian and guard him from danger."

These references are sufficient to convince the most incredulous, that the Great Treaty with William Penn was made by the Indians at Shackamaxan.

The Elm Treaty.

To E. C. Reigart, Esquire, member of the House of Representatives at Harrisburg, I am indebted for the following information.

"I find a Treaty was made on the fifteenth of June, 1682, at the house of Captain Lasse Cock, for land on the Delaware, extending westward a considerable distance, beginning at a White Oak on land in the tenure of John Wood, and by him called Grey Stones. The Indians were of the Delaware Nation. Captain Lasse Cock resided at Shackamaxan."

I sent a copy of this Treaty a few years since, to William Rawle, Esquire, President of the Historical Society of Pennsylvania.

In consequence of the heat and number of persons whom the house could not accommodate, the Indian conference was held under the Elm Tree, and the Treaty signed in the house of Captain Lasse, or Captain Lasey Cook.

Compare the following extract from a speech of a Conestoga Indian, with an extract from a speech of William Penn to the Indians at Shackamaxan, under the Elm Tree.

"The Governor of Virginia said he was our father, he called us his children; he chastised us, and we called on our Indian brethren, but they would not hearken.—We left our hunting ground.—We came to Conestogue.—We formed a chain of Friendship with Onas; if *the Tree* should fall it would not break a link."

Gordon's History of Pennsylvania, page 76.

"He would not, like the people of Maryland, call them his children or his brethren; for some parents chastise their children too severely, and brethren would disagree; nor would he compare their friendship to a chain which the rain might rust, or the fall of *a Tree* destroy."

Substitute Governor of Virginia or people of Virginia for people of Maryland, and the language of William Penn would be such as he probably used. Let it be borne in mind, that Nathaniel Bacon in Virginia in the year 1676, created such alarm among the Indians, that about sixty families removed to the Susquehanna, and settled at Conestogue.

A note, page 127 of Watson's Annals, says, "There is a deed from Governor Henoyon of New York of the year 1664, granting to Peter Cock his tract then called Shackamaxan." On the same page will be found "after the Treaty was held, William Penn and the Friends went into the house of Lasey Cock."

Among the Magistrates appointed by Governor Andross, for one year, for the up river jurisdiction, were Peter and Earnest Cock, 1664, 5. Peter Cock then resided at Shackamaxan.

POTTSVILLE—1835.

The information which we publish below concerning the population of this place will doubtless prove gratifying and acceptable to the majority of our readers.—The statement is the result of an actual enumeration of the inhabitants, made by the gentleman who was employed to take the census of 1830 in this county. The total number of resident population in 1830 was 2424, and the total number at present, as appears below, is 3117, showing an increase since that period of 693.—This result is certainly greater than we anticipated. With every allowance for the comparatively small degree of mortality, owing to the healthiness of our situation, and the rapid increase of births owing to the well known salubrity of our mountain air, still when we reflected upon the extent of emigration, we were not prepared to anticipate the result disclosed. The births have been strikingly numerous, as will be evident by an inspection of the table below, showing the population classed according to their respective ages. In 1825 our population did not exceed 300 persons. It will be seen that the number of males and females is nearly equal in our borough—an unusual circumstance in a new place. Our neighbors abroad who have been accustomed to hear so much about our declining situation, and to hear the language of Virgil respecting Troy applied to us, "*fuit Illium.*"

"Troy is no more—her glories now are gone,"

will be surprised to learn that Pottsville may still count no less than three thousand one hundred and seventeen inhabitants! And also that the prospect of her future increase is in the highest degree flattering, because her business prospects were never more so in all its various branches. In addition, the rising generation are truly multitudinous, and (under Providence) it is difficult to foretell to what incalculable extent these will continue henceforward to swell the number of our population. Let us hear no more, therefore, of the decline of Pottsville. The time has arrived when she may be said to have arisen, like the Phœnix, from her ashes. A few more years and she will be second to no inland town within the limits of Pennsylvania. For if, while struggling under the most unfavorable circumstances for her trade and industry, she has not only maintained her ground but actually gone on increasing in numbers—what may we not expect of her under propitious auspices.

		Males.	Females.	Total.
There are under 5 years.		277	307	584
between 5 and 10.		204	197	401
10	15	155	164	319
15	20	111	169	280
20	30	353	315	668
30	40	259	208	467
40	50	90	87	177
50	60	53	38	91
60	70	12	18	30
70	80	3	5	8
80	90	2	3	5
		1519	1511	3030
Free white males,				1519
Free white females,				1511
To which must be added				
Free coloured males,				39
Free coloured females,				48
Total population,				3117

Of the above number there are 247 foreigners not naturalized.

We also give below the population of Mount Carbon, which may be considered a part of Pottsville, though not embraced within the corporate limits.

MOUNT CARBON.

		Males.	Females.	Total.
Under 5 years		21	17	38
between 5 and	10	5	10	15
10	15	5	12	17
15	20	13	9	22
20	30	37	19	56
30	40	20	13	33
40	50	7	4	11
50	60	7	2	9
60	70	3	1	4
		118	87	205
Free white males,				118
Free white females,				87
Free coloured males,				5
Free coloured females,				3
Total,				213

Of the above number there are 30 foreigners not naturalized.

Total population of Pottsville,	3117
do do Mount Carbon.	213
	3330

The following statement gives the different occupations of the inhabitants of Pottsville—it only includes the heads of families. There are various kinds of business also carried on by single freemen.

2	Lawyers,*	2	Printers,
34	Colliers,	1	Apothecary,
19	Merchants,†	3	Ladies,
20	Innkeepers,	1	Plummer,
9	Masons,	1	Weaver,
19	Boatmen,	6	Physicians,
38	Carpenters,	2	Bakers,
11	Boat Builders,	4	Cabinet Makers,
1	Livery Stable,	1	Dyer,
93	Miners,	2	Hatters,
84	Labourers,	4	Boarding houses,
3	Brick Makers,	1	Vinegar Merchant,
2	Farmers,	2	Barbers,
3	Engineers,	3	Milliners,
15	Blacksmiths,	2	Pedlars,
18	Mantua-Makers,	1	Coachmaker,
2	Painters,	1	Mill-wright,
21	Shoemakers,	3	Saddlers,
1	Miller,	4	Gentlemen,
3	Brewers,	5	Teachers,
15	Washer-women,	2	Tanners,
14	Clerks,	1	Skin Dresser,
2	Wheel-wrights,	4	Justices of the Peace,
3	Beer-houses,	1	Lock Smith,
1	Minister of Gospel,	1	Bottling cellar,
2	Iron Masters,	4	Traders,
2	Weigh Masters,	11	Tailors,
1	Canal toll collector,	1	Drover,
1	Road toll collector,	1	Jeweller,
1	Post Master,	1	Turner,
1	U. S. Mail Contractor,	3	Plasterers,
3	Constables,	2	Tin Smiths,
1	Potter,	3	Tobacconists,
7	Confectioners,	1	Tallow Chandler,
1	Stone Cutter,	1	Soap Boiler,
9	Butchers,	1	English Pensioner,
1	Gunsmith,		

* There are also 2 Lawyers who are not heads of families.

† There are four merchants who are not heads of families.

COAL TRADE.

Third Annual Report made to the Coal Mining Association of Schuylkill County, January, 1835.

The duty again devolves on the Board of Trade of presenting to the association an account of the past year's operations, and their views of the trade in general.

Three years have elapsed since the Coal Mining Association was organized, and during that brief period, many and great changes have taken place, but the trade has advanced with a sure and steady pace, and has attained that station which warrants us in saying it is now one of the most considerable branches of production, which our state possesses.

The rugged hills of our region have become a busy theatre of active industry, and those tracts which ten years since could afford but a scant support to a few hardy woodsmen, now team with a busy population, who by their industry (that true source of national wealth,) sustained by the enterprise, and funds of citizens drawn hither from other places, are daily extracting from the earth, her hitherto dormant treasures, and forwarding to the sea-board an article, which is destined ere long to supplant, if not entirely supersede the use of wood as a fuel; nor is the comfort and economy of coal as a fuel its only recommendation; already has its safety been so well tested, that insurances on property in our cities have fallen far below their former rates, as fires are found to be less frequent, and as those devastating conflagrations formerly so common in our large cities, are now unknown where our staple is used. The value of property in those places, has, in consequence, increased in the same proportion; in addition to which, every species of property on the line of the canal has risen in value. The property in Philadelphia in the vicinity of the Schuylkill, has advanced beyond the most sanguine expectations of the former holders; and that section of the city which but a few years since was a waste common, is now a busy mart of trade.

To the coal trade in a great measure, (if not entirely) this rise in the value of property is attributable, and when we reflect that the trade is but in its infancy, we may with safety anticipate a still greater advance, and in a short period expect to see both banks of the river, lined with wharves, loaded with the product of our region.

The amount sent from this section during the past season as anticipated in our last report, was less than that of the preceding year, the causes assigned in our last, having, we fear, operated against the trade throughout all its ramifications, as it is found that both the other districts have experienced a like depression.

It was the opinion of the board that with a healthy state of trade, the consumption of the present year would amount to 600,000 tons; they still believe they were warranted in that estimate, by the known consumption of the preceding year, which they were enabled to ascertain from the following facts.

The extreme severity of the winter of 1831–32, caused all the coal then on hand to be consumed, and when the spring opened, the depots were drained and the business commenced with clear wharves.

In the year 1832 there were sent from all sources rising 370,000 tons; the winter of 1832–33 being unusually mild, and the supply large in comparison with former years, it was found there was remaining unsold in all the cities on the 1st April, 1833, 70,000 tons, leaving for the consumption of the preceding year, 300,000 tons; the following year the supply was much greater, and the winter equally as mild as the former, if not more so, and from the best information we have been able to obtain, and that from sources to be relied on, there was on the 1st of April, 1834, unsold in all the cities, 120,000 tons. The following statement will exhibit the amount furnished and consumed in the time above stated.

April 1, 1832—none in market.		
Sent this year from all sources	373,871	tons.
Remaining at all points and unsold	70,000	
Consumed	303,871	
April 1, 1833—old stock remaining over	70,000	tons.
Sent this year from all sources	484,986	
	554,986	
Surplus remaining at all points unsold	120,000	
Consumed	434,986	
April 1, 1834—old stock remaining over	120,000	tons.
Sent this year from Schuylkill	224,242	
Lehigh	106,244	
Lackawanna	43,700	
In market at the close of navigation	494,186	

By the above it appears that the increased consumption in 1833–34 over that of 1832–33 was more than 43 per cent, and that the whole stock on hand when the season closed, was but 59,200 tons, or 13 3–5 per cent over the actual consumption of that year.

The winters of 1832–33 and 1833–34 were both unusually mild, while thus far in the present winter the cold has been proportionally greater, and should it continue equally cold it is believed the supply on hand will not exceed the demand.

It is not the interest of the collier that a scarcity should be felt at any point, but that there should be a full and ample stock, in order that the consumer may at all times with safety rely on being supplied, as by this means only can we depend on our trade being regular, fluctuations are at all times injurious in every trade, but particularly so to the collier, his grand object should be a regular and steady market, and experience has taught us that low prices and a steady demand are far preferable to high rates with uncertainty. Most of us have witnessed the various fluctuations to which our business has been subjected from its commencement, but in no instance have we known the collier derive a benefit from a sudden rise. His contracts being generally made for given quantities, he is bound to supply at the contracted price, while the dealer, the boatman, and laborers, are the only ones who derive a profit from a sudden demand. We have within the last three years, witnessed the price of freight to Philadelphia vary from 85 cents to $3 75 per ton, while the price of Coal, as delivered by the colliers on their contracts, was unchanged.

The business requires that the mines should be constantly worked to preserve them in good order for if neglected or suffered to lie idle, dilapidation soon takes place; in addition to which the workings being in what is technically termed surface coal, more faults are to be encountered than may be supposed to exist when the working is below the water level, and the roof more firm, and in consequence the operations must be continued at all seasons and to a certain extent without regard to the demand. Until recently all the coal sent to market from this section was taken from seams above the water level, and even up to this time no fair experiment has been made on what is below.

The consumption along the line of the canal has regularly increased, (excepting for the last year, when, owing to the purchasers having delayed too long, they failed in getting a supply) and the rail roads diverging from Philadelphia have been a means of introducing the

coal into the towns and villages around to a considerable extent.

The following account taken from the books of the Navigation Company, will exhibit the amount consumed along the line from the opening of the canal in 1825, to the present time—

1825	1,450 tons.
1826	3,154
1827	3,372
1828	3,332
1829	5,321
1830	6,150
1831	7,848
1832	13,429
1833	19,432
1834	18,572

Within the last year an improvement has been made in the burning of lime, and the small coal and dirt heretofore deemed as useless, and indeed cumbersome about the mouths of the drifts, is now consumed for that purpose.

There was imported into the United States in the year ending September 30th, 1834, 1,626,185 bushels of Bituminous Coal, being 721,852 bushels less than was imported in the preceding year; the annual exports have not been ascertained correctly, as no return has been made up to this date.

To make up the whole amount of Bituminous coal annually consumed on the seaboard has, for some time, engaged the attention of the Board, and they have made some progress in that investigation, but as their table is not yet fully completed, owing to the difficulty of obtaining correct information from some tracts, they must defer until a future meeting the presenting of that exhibit; in it they wish to present at one view, the whole amount raised and consumed throughout the whole extent of the seaboard, and to give correct data for future estimates. When that is completed they will be able to lay before you an account that will place the trade in such a light as will enable all to form correct conclusions.

The number of Boats on the canal remains about the same as last year, when they were estimated at 570; those then in use had undergone repairs when needed, and were generally in good order; and although but few new ones have been built, they have been still sufficient to supply the place of those that were drawn off as unfit for further service.

The price of freight has been lower throughout the season than was ever before known, but it is believed that the increased facilities offered by the improved state of the canal, and the enlarged size of the boats will enable us to send to market next season without any material *advance* being required.

A large number of boats remained idle during the last season, and are scattered along the canal in secure places; many of those will necessarily require repairs, but when put in order and added to the stock now in use, it is believed there will be sufficient for the trade next season.

The tonnage of the boats has gradually increased since 1825, and can be still further augmented when the trade has attained that point to require it. The following table will give the increased amount up to this date:

Years.	Number of trips.	Tons carried.	Average tons per boat.
1825	260	6,500	25
1826	652	16,767	25 15—20
1827	1,183	31,360	26 10—20
1828	1,751	47,284	27
1829	2,909	79,973	37 10—20
1830	2,978	89,984	30 4—20
1831	2,338	81,854	35
1832	5,961	209,271	35 2—20
1833	6,054	250,588	41 7—20
1834	5,167	224,242	43 8—20

The boats on the canal give employment to two men and one boy each, exclusive of horses, making an aggregate (when all employed) of 1140 men and 570 boys, independent of the persons employed in loading and unloading, as also those stationed on the line of the canal.

It should be borne in mind that the persons above mentioned are employed in transporting the coal to tide water only, and that the same number of persons, as also the same amount of tonnage, are required to transport it from that point to the different places along the coast, where it is required for consumption.

Thus it appears that the trade on the Schuylkill alone gives employment to 24,733 tons for internal trade, and a like amount (excepting so much as is consumed along the line of canal and in Philadelphia) for coasting, together 49,466 tons, an amount exceeding any other branch of trade in the United States. If to this be added the amount sent from the Lehigh and Lackawana and the Bituminous coal raised in Virginia, it will not fall short of 80,000 tons, an amount that will bear a comparison with that of many of our commercial cities, and from the certain increase that will take place, we have good reason to expect that Congress will continue to sustain a trade that may with propriety be called a nursery for our seamen.

The canal was opened on the 13th of March and closed by the frost on the 15th of December, giving 276 days. In its present state it is estimated as able to transport 800,000 tons, and by deepening it one foot the boats may be enlarged and the transit increased without any material loss of water; but the Schuylkill is capable of still greater improvements, and it is believed that the day is not far distant when the present canal will give place to a slack water navigation sufficient to admit vessels to load at our wharves here, and carry our product direct from this place to the most distant part of our extended coast.

In our last report we stated our intention of addressing the Navigation Company, on the subject of a reduction of Tolls and other charges; that subject was promptly attended to and the correspondence is now laid before the association together with other correspondence and communications.

The Company during the last season reduced the number of ferries by erecting bridges, but declined acting on the subject of toll at that time,—we have every confidence that they will, ere long, comply with the just proposition made, and put the collieries of this section on a more favorable footing.

The dam erected by the Company on Tumbling Run (to serve as a reservoir for the canal) has been of material service and fully answers the purpose for which it was made, and although the past summer was dry and the springs lower than they had been known to be for many years previous—the canal was amply supplied from that source, and no interruption in the trade was experienced.

The dam is estimated, when full, to contain 24,000,000 cubic feet of water, equal to the contents of 3,000 locks. The Company are erecting another dam on the same stream, about half a mile higher up, which will contain about 50,000,000 cubic feet of water. When this is completed all fears of a scarcity, even in the dryest season, will have vanished.

The Tumbling Run is a strong and regular stream, pursuing a course of about nine miles between the Second and Sharp Mountain,—and from its rapid fall is capable of affording a succession of Dams, at short distances throughout its whole course, if found requisite.

The free and unlimited use of the water of the Schuylkill by the Navigation Company, has created fears in the minds of many of the citizens of Philadelphia, that as the trade increases the supply of water for city purposes will be curtailed, and eventually rendered very precarious; already have disputes arisen between the City Authorities and the Navigation Compa-

ny on that subject,—but a plan has been proposed which, if carried into effect, will prevent the much dreaded scarcity, and add materially to the accommodation of the Coal Trade.

The plan contemplated is to continue the Canal from Fair Mount dam (where it now terminates) along the western side of the river to Mill Creek, a distance of 2½ miles, where if necessary, that stream may be introduced as a feeder, and as there will be no outlet necessary, all the water for that side may be retained in the Canal, or the water from Mill Creek may be thrown into Fair Mount Dam, and thereby increase the supply and aid the trade for those Boats that enter the River to discharge on the eastern bank.

To effect an object so beneficial to the Trade, and as your Board think, to the City also, a law is necessary to enable the projectors to carry it into effect, as the act authorising the construction of a canal confers no power on the Company to extend their works beyond their present termination, an application is now before the Legislature for such a law, and we have every confidence that when fairly viewed and considered, it will receive their sanction.

To accommodate the trade, even in its present state, the wharf room is scarcely sufficient, and should it increase in the same ratio as it has done since the commencement, in a few years the present grounds will be wholly inadequate, independent of the heavy amount of Bituminous coal, iron, lumber, and other articles that will be sent from the Susquehanna by the Danville Rail Road and Union Canal.

Should the proposed plan be carried into effect, an ample space will be given, and that portion of our product designed for a foreign market, may be shipped at a much less expense than at present.

The elevation of the canal above tide water is such, that by enlarging it opposite the wharves, so as to admit of bringing boats near to *the margin of the docks*—chutes may be erected and the Coal discharged immediately into the vessels destined to convey it to a foreign market, by which means it will be shipped perfectly clean and in good order, without the labor and wastage incident to the repeated handling of the present plan.

The Board have long been desirous of procuring a correct map of the Coal Region, and have exerted themselves to secure the talents of a gentleman qualified for that undertaking: and they feel gratified that they are able to announce to you, that such a work is in progress and will soon be completed.

The work has been undertaken by Mr. Samuel B. Fisher, an experienced civil engineer, who has devoted much time to acquire an intimate knowledge of the Region, as also the owners of the several tracts, and the location of the different seams of Coal, as far as they have been ascertained.

The subject will occupy two maps: the first of which, on a scale of 1⅝ inches to the mile, will take in the Coal Fields of the Schuylkill, Little Schuylkill, Lehigh, Beaver Meadow, Mahanoy, Lykens Valley, and Swatara, covering a space of fifteen miles from North to South, and forty miles from East to West; and will lay down each tract with the original patentee, the number of acres, date of survey, and, as far as possible, the names of the present owners.

The Second, on a scale of 3 inches to the mile, will include the Schuylkill Coal Field only, and will give a view of the different tracts, streams, rail roads and branches, and all the beds now opened.

A book will accompany this last, giving an accurate account (taken from measurement) of all the openings, the thickness and pitch of the Beds, and quantity of the Coal.

The Board have examined the work during its progress, and recommend it to the attention and support of the Association: they believe it to be a correct delineation of the Region: the location of the beds of Coal are accurately marked, and their character correctly given; they will continue their aid to Mr. Fisher, until it is completed, which they expect will be in all, this winter; and they have every hope that a work, combining so much useful and correct information, will meet with such support as will indemnify the compiler for his time and labor, so usefully directed.

That iron ore did abound in this section, was believed by many; but it was only during the past summer that the fact was fairly proved. In examining some of the tunnels (driven through the Coal measure, and at right angles with the seams of Coal) the ore was found, laying in regular veins, in the immediate neighborhood of the Coal, and in such quantities as to warrant the assertion, that it will be worth working. It is of the two kinds usually denominated Kidney and Bog ore, and from experiments made, is found capable of being worked with Anthracite Coal.

A trial was made at the furnace of Messrs. Buckley & Swift, which resulted in giving a sufficient quantity of iron, to prove that the plan would answer, when fairly tested.

A trial of refining Iron with Anthracite Coal was also made by the same gentlemen, in a reverberatory furnace, and was crowned with complete success.

A similar trial was made near Boston, some time since, and more than one hundred tons refined.

A patent has been taken out by our townsman, Mr. Thomas S. Ridgway, for making Iron with Anthracite Coal. By his plan the sulphur is driven off from the Coal, and the ore carbonized by the same fire that smelts it, and the blasting and reverberatory furnace, are both embraced in one stack.

The model has been examined and approved by experienced iron masters, and they all agree that it combines all the requisites for smelting and refining iron.

The discovery of iron ore in the immediate vicinity of the Coal, and the plan of smelting it with Anthracite, will open a new prospect to all engaged, and we may with certainty look forward to the day, when this section will realise the expectations of those who have embarked their hopes in it.

In England, the smelting of one ton of iron ore is estimated to consume seven tons of Coal; and to convert the pigs into bar iron, three tons more are required, but as our Coal contains a much larger portion of carbon than the bituminous, and does not suffer the loss that is incident to coking, it is believed that to manufacture one ton of bar iron, from the ore, five tons of Coal will be sufficient. This branch alone will consume a vast quantity of our Coal, but when to this is added the manufacture of other articles which must be located where fuel is abundant, the increased consumption will be immense. Experience has taught that the manufactory of most articles can be conducted with more economy in a Coal district, than any other; and accordingly we find that all the great manufacturing towns in England are located in the immediate neighborhood of the Coal Fields.

The Coal consumed annually in England is estimated at 18,000,000 tons, exceeding one ton for every inhabitant. In this country it is but partially used, but the increase has been rapid, and a short period only is required before it will reach an amount that would at this day be too great to be credited. Already has it been used to some extent for steam purposes, and a further consumption must take place when the wood is cleared from the margin of the streams traversed by steam boats, which, from the rapid manner in which it has disappeared within the last ten years, makes it certain that another like period cannot elapse, before the expense of procuring fuel of that kind will exceed that at which Coal can be delivered for.

The Association was formed for the purpose of collecting and disseminating information on subjects connected with mining, and your Board have studiously avoided every point irrelevant to that object.

They have viewed the Coal Trade as one that is in an infant state, in this country,and requiring the united aid and support of *all*, to bring it to a successful issue. They view it as a trade capable of great improvement, and that as all are but new in it, all should throw their experience in the general stock, that the whole may derive the benefit.

Acting on this principle, they have pursued the one grand object, that of knowledge of, and improvement in the trade; and they feel gratified that the result has, thus far, answered their fullest expectations.

Respectfully submitted.

B. H. SPRINGER, President.

Pottsville, Jan. 5, 1835.

At a meeting of the Coal Mining Association, held at the Pennsylvania Hall, January 5, 1835, the following persons were unanimously elected the officers of the Association for the ensuing year:—

President—*Burd Patterson.*

Vice President—*John C. Offerman.*

Treasurer—*Samuel Lewis.*

Secretaries—*Andrew Russel and Charles Lawton.*

Board of Trade—Samuel Brooke, Samuel Lewis, Thomas C. Williams, Samuel J. Potts, Martin Weaver, G. G. Palmer, and James Wilde.

B. H. Springer, President of the Board of Trade, having resigned, it was

Resolved, That the thanks of this Association be tendered to Mr. Springer, for the ability, research and diligence that he has evinced in the discharge of his duties as the President of the Board of Trade, and while we regret his intended removal from among us, we sincerely wish success to his intended establishment in the Coal Trade in Philadelphia, and the Secretary is requested to communicate this resolution to Mr. Springer, and append it to the the Report.

Extract from the Minutes.

C. LAWTON, Secretary.

At a meeting of the Board of Trade on the same evening, *G. G. Palmer*, was elected President, and *T. C. Williams*, Secretary.

From the Pittsburg Gazette.

NAVIGATION OF THE OHIO.—The editor of the Philadelphia Commercial Herald,* some time since, requested us to give some account of the times at which the navigation of the Ohio was usually interrupted by ice and low water, for some years past. We had intended to do so, but other matters have prevented it. The opening of the rivers, yesterday, has called our attention to it again, and we now perform that duty in part. Messrs. Jacob Forsyth & Co. have politely furnished us with their steam boat reporter, since 1829, from which we collect the following information.

This book commences on the 4th of August, 1829, and gives arrivals and departures from and to Louisville, Cincinnati, throughout August, September, October, November and December, of that year, and through January, February, March, and the succeeding months of 1830, until the 14th of July.

The last arrival in January was the Talisman on the 18th; and the last departure the Lark, on the 19th.—Probably about the 20th or 21st, the river was closed by ice, though the book does not state this. Subsequently we find the following note:—*River opened Feb. 20, 1830.*" From the 14th of July, and through the months of August, September, and October, there were no arrivals or departures. On the 23d of November, 1830, navigation was resumed, and continued open until the 14th of January, 1831, when it ceased. Subsequently we find this note:—"*River opened 19th of Feb.* 1831." Boats continued to arrive and depart until the 27th of September, 1831. The last arrival was the Versailles, on the 26th, and same boat departed next day.

From that time, there were no arrivals or departures until the 10th November, when navigation recommenced. Afterwards we find the following note:— "*River closed Dec. 4th* 1831." Then the following:—"*Ice broke Jan. 7th*, 1832." Subsequently the following:—"*Navigation again* stopped with ice, January 26th, 1832." It continued closed, however, but a short time; for, on the 1st of February, the Talisman departed for Louisville; and, on the 2d, the Herald (a new boat) for Mobile.

From this time, steam boats arrived and departed with ordinary regularity, until the 29th of June—from that day, there was neither an arrival or departure until the 11th of August, when navigation recommenced, and continued until Sept. 4.

From the 4th of September till the 9th of November, navigation was suspended by low water. From the 9th November, 1832, there was no interruption until the 21st day of July, 1833, except from the 14th till the 19th of January, that being the longest period in which there was no arrival or departure.

On the 21st of July, 1833, departed the steamboats Mount Vernon and Albion, being the last. There was then neither an arrival or departure until the 23d of September. From that day till the 1st of November, there were 13 arrivals and 19 departures. During the months of November, December, and up to the 3d of January, 1834, the navigation was brisk and active. Then we find the following notes.—*Monongahela River closed January 9th*, 1834.—*Allegheny closed same day.*" Immediately below is the following note:—"*Ice broke up, with high flood, Jan.* 12." From that date, until the 29th of July, navigation was regular and uninterrupted. During August and September, there was neither arrival nor departure.

Then comes the following note:—"*Navigation commenced for Steam Boats, Oct.* 13," and continued until January, 1835, when we noticed the following minute—"*River closed on the night of the 3d of January*, 1835." Then—"*River opened on the 23d.*"

Navigation then became quite brisk—but, on the 6th of February, inst., it was again stopped by ice. On the 19th inst., the ice broke up again, which brings us to the present time.

Here, then, we have a faithful account of the interruptions of navigation during five years and a half, by which it appears that—

In 1830, the interruption by ice		was about	30 days.
1831	"	"	62
1832	"	"	12
1833	"	"	5
1834	"	"	3
			112 days.
In 1830, interruption by	law	water about	130 days.
1831	"	"	44
1832	"	"	109
1833	"	"	64
1834	"	"	76
			423
			112
Total interruption by ice and low water			535 days.

It is gratifying to find that the interruption by ice, during these five years, was less than four months.—The obstruction by low water may be remedied.

* Editor of Register? See Vol. XIV. page 318.